## (19) W rld Intellectual Property Organization International Bureau



## 

(43) International Publication Date 22 February 2001 (22.02.2001)

PCT

(51) International Patent Classification?:

A61K 39/39.

(10) International Publication Number WO 01/12222 A1

38/02 C07K 14/435 14/78 17/08

(21) International Application Number: PCT/KR99/00460

(22) International Filing Date: 18 August 1999 (18:08:1999)

(25) Filing Language:

English

(26) Publication Language:

English

(71) Applicants and

(72) Inventors: KIM, Ho-Youn [KR/KR]; 5-205, Daelim Apartment, Ohkum-dong, Songpa-ku, Seoul 138-737 (KR). PARK, Jong-Sang [KR/KR]: 18-1001. Eunma Apartment. Daechi-dong, Kangnam-ku, Seoul 135-778 (KR)

(72) Inventors: and

(75) Inventors/Applicants (for US only): RYOO, Zae-Young [KR/KR]; 211-606, Jugong Apartment, Sanbon-dong, Gunpo-City, Kyunggi-do 435-040 (KR), BAE, Eulyoung [KR/KR]; 301, Hanmi Villa, 54-4, Banpo-dong, Seocho-ku, Seoul 137-040 (KR). LEE, Woo-Kyoung [KR/KR]; 1572-16, Shillim-11-dong, Kwanak-ku, Seoul 151-021 (KR) CHO, Chul-Soo [KR/KR]; No. B-503, Samho Garden Apartment, 32-8, Banpo-dong, Seocho-ku, Seoul 137-761 (KR). PARK, Sung-Hwan [KR/KR]; No. 104-1804, Youwon Apartment, Seocho-dong, Seocho-ku,

Seoul 137-780 (KR). KIM, Wan-Uk [KR/KR]; No. 503-901, Mido 2nd Apartment, Banpo-dong, Seocho-ku, Seoul 137-769 (KR).

(74) Agents: YOON, Dong-Yol et al.: 8th floor, Dae-Heung Building, 648-23, Yoksam-dong, Kangnam-ku, Seoul 135-748 (KR).

(81) Designated States (national): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES. FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP. KR, KZ, LC, LK, LR. LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN. YU. ZA. ZW.

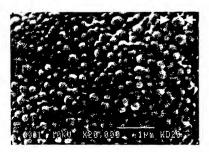
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW). Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ. TM), European patent (AT, BE, CH. CY, DE, DK, ES, FI, FR. GB. GR. IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: IMMUNOLOGICAL TOLERANCE-INDUCTION AGENT



(57) Abstract: A method for treating autoimmune diseases by administering orally to a mammal suffering from autoimmune diseases particles of biodegradable polymers or their complex with an autoimmune antigen is provided. Only single administration can effectively induce oral tolerance to autoimmune diseases, resulting in a strong and prolonged suppress of the diseases.